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Defiance in Obedience Research:

Motivational Orientation and Refusing to Acquiesce

by

Jonathan Mark Burgess

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment

of requirements for the degree of Doctor of Philosophy

Department of Psychology

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Defiance in Obedience Research: Motivational Orientation and Refusing to Acquiesce" submitted by Jonathan Mark Burgess in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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Dedication

For my parents, Rosina and Richard. For their commitment to, and love of, each other, me, and life.

Abstract

The infamous, and dramatic, studies of both Asch and Milgram are often presented to illustrate the compliant and obedient nature of people. The vast majority of subsequent experimental social psychology research has required participants to comply with a mundane request. Such research has implicitly assumed participant acquiescence and has served to reinforce the pervasive view that participants are compliant and obedient. Three experiments were conducted to examine whether participants would defy noxious requests to act contrary to personal attitudes. deCharms' (1968) notion of motivational orientation was used to predict participant defiance and compliance. In Experiment 1 ($N = 50$), participants were ordered to write an essay in support of an imminent large tuition increase. In Experiment 2 ($N = 50$), participants were given the same directions and also were videotaped reading their essay (that was to be sent to an evaluative committee). In Experiment 3 ($N = 72$), participants were ordered to acquiesce to demands to further discriminate against an already disadvantaged marginal group. In all three experiments, Origin-like experiences were associated with defiance (manifested either by refusing to write the prescribed essay or, by writing an essay in opposition to an experimenter's demands), $p < .05$. Results are discussed in terms of how life experiences can affect an individual's motivational orientation and propensity to resist noxious demands to comply.

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My life would be far less enjoyable without the comradeship of The Lad Amis, 'Nator, Chase, Lug, Rodders, and Albi. Amis and I ruled the pool bars (or, the juke-box at least) and patrolled Whyte Ave for far too long. 'Nator advised me to get into this mess in the first place and has unparalleled navigational ability. Chase has managed to convince me to throw myself off a mountain, and recently touched us all with his kind words. Lug inspires us all to march to the beat of our own drum, and has taken me up the mountain a Man only to come down a Dude. At 5 in the morning, Rodders is the greatest golfer in the world, and at 5 in the afternoon he's still ready to spar. Albi's influence on my learning continues to this day. Once again, sorry about the cat and rabbit.

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Defiance in Obedience Research:

Motivational Orientation and Refusing to Acquiesce.

Rebellion is often viewed as insurgent chaos, yet it can also activate beneficial restructuring of socio-political landscapes. Indeed, Thomas Jefferson maintained that "a little rebellion now and then is a good thing, and as necessary in the political world as storms in the physical." Social critics aware of the positive aspects of defiance have warned that we live in a prevailing culture of constraint rather than growth, a climate that advocates stability to the detriment of defiance, exploration, and change (e.g., Furedi, 1997). Under normal conditions, initiating rebellious behavior can be a monumental task. Defiance against the imposition of a superordinate code assumes an especially potent interpersonal aspect when it takes the form of a direct refusal to comply with the demands of specific authority figures. Alexander Solzhenitsyn (1978) has accused members of contemporary society of lacking the courage and conviction to defy authoritative dictates. Moreover, several decades after the groundbreaking studies of Asch (1951) and Milgram (1963), social psychology research has continued to emphasize that compliance and obedience are relatively easy to induce. Why should defiance prove to be so difficult and rare?

People have a personal history of looking to others for guidance. From an early age, directive authorities, such as parents and teachers, help guide how children learn and adopt social norms (Laupa, Turiel, & Cowan, 1995). As socialization progresses, children adhere to these norms independently of the presence of authority figures. In addition, children see their peers conform to the

same norms, which further reinforces the legitimacy of the hierarchical position attained by authorities within social systems. It is understandable then, that over time, people learn to trust authorities and accept them as an integral part of social life (see also Kelman, & Hamilton, 1989). Moreover, the requests that parents and teachers make are normally accepted by children as being reasonable, and understandable, and are subsequently reinforced with each of the child's successive acquiescent behaviors. These requests that childhood authorities make in the course of everyday life can be seen as demands for mundane compliance. In most families it would be more common to hear, "do your homework so that you can give yourself more options in life" than it would be to hear, "your brother performed poorly on his spelling test, give him an electric shock."

In wider society, and under exceptional circumstances, an authority may demand noxious compliance and require people to behave beyond the normal bounds of mundane expectations (e.g., commanding a platoon to raze My Lai village, convincing a research participant to deliver an electric shock to a fellow participant). Unlike mundane compliance, acquiescing to noxious demands involves doing something that will likely be detrimental to oneself or detrimental to others. A person who refuses to acquiesce defies more than the noxious demands of the authority. For example, an individual soldier who refuses to execute what he sees as illegitimate orders of a commanding officer also rebels against the historically established military norm prescribing that subordinates obey. Normal socialization pressures induce people to comply with authority figures, and the pressures to comply are substantially greater in the military.

Military psychology experts have indicated that it should not be surprising that soldiers can be induced to obey orders that they would have found abhorrent prior to their specialized training (Grossman, 1995).

The nonmilitary segments of society to which most of us belong tend not to have training that is as extreme in inducing compliance to authority. So, would ordinary people react differently to noxious pressures to comply? Research involving hypothetical authority situations has suggested a different answer to this question than research involving actual behavior against the demands of a legitimate authority figure.

When presented with a hypothetical authority situation, young children unanimously predicted they would discount the demands of a teacher who had asked them to do something that would result in harm to another person (Laupa, & Turiel, 1993). Subsequently, Laupa et al. (1995) argued that the legitimacy of an authority (such as a teacher) is negated if that authority gives an incompetent or unacceptable command. It is reasonable to conclude that even young children are capable of taking into account the qualities of the social context, of weighing these against the moral concerns of harming another person, and of predicting that they would not comply with a request they consider to be wrong. It also seems reasonable to assume that adults would be capable of these judgments and would claim that they too would defy a demand to harm another person. As we know, this is true.

Milgram presented Yale University psychology students and psychiatry students with a hypothetical authority situation and asked them to predict how

many people could be induced by an experimenter to deliver a severe electric shock to a fellow participant. Psychology students predicted that one in every 100 participants would be completely compliant, and psychiatry students predicted only one in every 1000 participants would be completely compliant (Milgram, 1963). The hypothetical authority situation presented to the students was executed behaviorally in the now famous series of obedience studies. Each participant fulfilled "teaching" duties in a learning task. Participants were commanded to carry out an authority's orders, and were led to believe they were delivering an electric shock each time the "learner" made a mistake. Students' original predictions of obedience vastly underestimated actual obedience rates obtained in any of the experiments. In the standard baseline condition, noone quit before 300 volts, and 65% of participants continued to obey the experimenter to the highest level available, 450 volts. Unlike research involving hypothetical authority situations, Milgram's behavioral studies indicated that adults from nonmilitary groups could indeed be induced to comply with noxious demands of authority.

Milgram's results have been interpreted widely as evidence that situational factors can offset personal dispositions that should be in opposition to conformity (e.g., Helmreich, Bakeman, & Scherwitz, 1973; Zimbardo, & Lieppe, 1991). Milgram (1974) himself considered his work to illustrate a prominent phenomenon in recent history; namely, powerful situations will prove to be stronger determinants of peoples' actions than will personal variables.

Even taking into account situational pressures, it is still remarkable that participants in a psychology experiment would display such startling rates of

obedience. In contrast to the sanctions levied against those who defy military commands, there are no punishments or court-marshals for participants who refuse to comply with an experimenter's demands in psychological research. In the absence of the threat of punitive sanctions, we would intuitively expect a greater incidence of defiance. However, the astonishing compliance rates of participants in Milgram's studies and subsequent obedience research (e.g., Martin, Lobb, Chapman, & Spillane, 1976; Shanab, and Yahya, 1977) illustrate the very subtle but strong pressures to comply with authority. Research participants who are defiant in compliance research also defy more than just the demands of the experimenter. Similar to members of the military, participants enter psychology laboratories with an advanced knowledge of the institutionalized relationship between experimenter and participant. Participants become socialized into a subservient role vis-à-vis the experimenter. Therefore, in order to be defiant, the participant must also rebel against the historically established research norm prescribing that participants comply.

In contrast to the initial amazement at Milgram's results, researchers now take it for granted that participants will comply with an experimenter's demands. In addition, for decades, thousands of cognitive dissonance studies have demonstrated overwhelming rates of participant compliance by using an induced compliance method in which people are compelled to do something they would rather not. Compliance with authority figures is a central feature of many such studies. In order to test dissonance theory predictions, participants are commonly induced to act contrary to their values (e.g., Fazio, & Cooper, 1983), and advocate

a position they strongly oppose (e.g., Lieppe, & Elkin, 1992). The unquestioned assumption underlying such research is that people will comply and do as directed.

Studies designed intentionally to investigate defiance to authority are sparse. However, some researchers have noted instances where participants have in fact refused to comply with experimenters' requests. For example, almost 10% of participants in Festinger and Carlsmith's (1959) landmark cognitive dissonance experiment refused to comply with an experimenter's request to deceive a fellow participant. In addition, 15% of participants withdrew from a procedure requiring them to select, and administer, electric shocks to groups of decision makers who had employed ineffective bargaining strategies (Bandura, Underwood, & Fromson, 1975). More recently, Elliot and Devine (1994) reported defiance rates of 30% for two cognitive dissonance experiments in which experimenters tried to compel people to generate counter-attitudinal arguments to issues of personal significance (i.e., an imminent raise of tuition fees). Despite impressive rates of noncompliance in each of these experiments, the respective researchers' hypotheses would not have led them to speculate about the potential mechanisms underlying participants' defiant behavior. In light of the situational pressures for people to conform during typical laboratory research, people who react against compliance pressures would be highly interesting people to study. Irrefutably, situational pressures influence compliance, but might personal variables also account for differences in defiance rates?

Several studies have attempted to explain obedience and disobedience in terms of individual difference variables. For example, a sample of Milgram's obedient participants was more authoritarian than was a similar sample of disobedient participants (Elms, & Milgram, 1966). However, subsequent research on authoritarianism has generated minimal, if any, differences between compliant participants and defiant participants (Blass, 1991). Similarly, obedience and disobedience are unaffected by participants' relative standing on the introversion-extraversion dimension (Miranda, Caballero, Gomez, & Zamorano, 1981), social intelligence (Burley, & McGuiness, 1977), and hostility (Haas, 1966).

Rotter's (see 1966) dimension of internal-external locus of control has also been explored as a potential construct for understanding compliance, but has had mixed success in predicting compliance and defiance. For instance, obedient participants and disobedient participants did not differ on the IE Scale in a Milgram type laboratory experiment (Schurz, 1985), whereas Black student civil rights activists had significantly higher internal locus of control than did Black students who were not involved in the civil rights movement (Strickland, 1965).

Motivational orientation and perceptions of causality may be conceptually relevant in discriminating between those who comply and those who defy. deCharms (1968) noted that different motivational orientations could be induced and developed by situational factors. He coined the term "Origin" to describe the experience of being the causal agent of one's own behavior, and the term "Pawn" to describe the experience of one's own behavior being a response to extrinsic contingencies. Once established, Origin and Pawn states can persevere, affecting

both an individual's disposition (Williams, Grow, Freedman, Ryan, & Deci, 1996), and orientation to future tasks (Enzle, Wright, & Redondo, 1996). deCharms' foundational work has been supported and extended by the contemporary research of self-determination theorists. For example, Deci and Ryan (1987) have also indicated that the manner in which internalization of social norms and role-expectations is experienced can affect subsequent behavior. Deci and Ryan conceptualized internalization as a naturally occurring process through which individuals actively synthesize extrinsic cultural mores, values, and regulations. The most complete form of internalization occurs when cultural norms become accepted as an integral aspect of selfhood. Internalization experiences can be described along a continuum whereby external regulation represents the most extreme form of extrinsic control, and intermediary stages of introjected regulation and identified regulation are associated with increasing degrees of self-determination. Integrated regulation represents the most extreme form of self-determined internalization and is characterized by individuals feeling that they engage in desired cultural actions with full personal volition. Self-determination theorists believe the most effective internalization process (i.e., that which develops integrated regulation) to be autonomy-supportive as opposed to extrinsically-determined (e.g., Deci, Eghrari, Patrick, & Leone, 1994; Ryan, & Connell, 1989). Autonomy-supportive internalization emphasizes self-determination throughout the learning process by maximizing personal choice and minimizing extrinsic control (i.e., a state akin to that of an Origin experience). Rather than feeling coerced into action, people identify with the value of the

activity and eventually experience their behaviors as self-initiated and self-regulated. In contrast, extrinsically-determined internalization minimizes self-determination by minimizing personal choice and maximizing extrinsic control (i.e., a state akin to that of a Pawn experience). Rather than being causal agents, people experience their behaviors as being caused by situational forces or by introjected forms of regulation (Ryan, Deci, & Grolnick, 1995).

In terms of responding to external commands there are likely to be a number of benefits of having internalized cultural mores and values in an autonomy-supportive manner. A self-determined socialization process would have been infused with experiences that reinforce the importance of personal autonomy. Hence, in addition to integrating initially extrinsically motivated actions, people also develop a greater sense of the importance of personal freedom when acting in response to extrinsically imposed expectations and also feel that their autonomy is important. As a result, those people whose internalization and life experiences have been predominantly Origin-like should feel autonomous and effective when acting in their environments. Socialization processes that continually emphasize external regulation and introjected regulation effectively disregard personal autonomy. Consequently, those whose internalization and life experiences have been predominantly Pawn-like should exhibit compliance-based behaviors, be relatively susceptible to externally controlling forces in their environments, and feel powerless and ineffective. Moreover, people who experience life predominantly as Origins might selectively orient themselves towards autonomy supportive contextual factors. In contrast,

those who experience life predominantly as Pawns might perceive the very same environmental context differently as they would orient themselves towards controlling contextual factors (Deci, & Ryan, 1987). For example, a lecturer employing a variety of autonomy-supportive strategies and controlling strategies would likely be viewed as autonomy-supportive by Origins, but would likely be viewed as controlling by Pawns. This same phenomenon was addressed earlier by deCharms (1968):

> The personal aspect is more important motivationally than objective facts. If the person feels he is an Origin, that is more important in predicting his behavior than any objective indications of coercion. Conversely, if he considers himself a Pawn, his behavior will be strongly influenced, despite any objective evidence that he is free. (p. 274).

Internalization and life experiences that predominantly induce compliance tend to promote extrinsically-oriented development (Kelman, & Hamilton, 1989). In essence, people comply principally with those behavioral norms that enable them to fulfil the extrinsically-imposed requirements of their position. Therefore, of their own volition, extrinsically-oriented people (i.e., Pawns) should be more likely to conform to external demands than they are to initiate autonomous action. In contrast, Origins should be less susceptible to external control and should perceive themselves as autonomous as opposed to being bound by conventional norms and extrinsic contingencies (deCharms, 1968). Consequently, they would be more likely to oppose extrinsic contingencies that counter their self-determined value system.

Are people of an Origin disposition more likely than those of a Pawn disposition to resist authoritative demands and initiate deviant behavior? Kohn analyzed peoples' relative stance to authority according to whether they were from higher or lower strata of society (Kohn 1977; Kohn, & Schooler, 1983). Kohn argued that feeling self-directed is characteristic of those occupying higher social positions and may influence these peoples' greater willingness to question authority. Self-direction becomes a critical component in personal resistance as it strengthens the sense that the individual is an independent agent capable of taking an active, questioning stance, even in authority situations. In contrast, those whose life experiences provide little opportunity for self-direction (in Kohn's analysis, those in the lower stratum of society) have less freedom of choice, feel controlled by fate, and are less likely to resist authoritative demands.

In another analysis of the dynamics of authority, Kelman and Hamilton (1989) outlined three types of political orientation, presented as personal disposition, that significantly impact both peoples' relationship to authority and their subsequent reactions to commands. Although socialization pressures induce people to obey authority, those who are value-oriented (i.e., operate morally) behave differently in response to noxious demands than those who are rule-oriented (i.e., comply with proscribed rules) or role-oriented (i.e., identify with their role in the social system). Kelman and Hamilton proposed that those who are value-oriented would feel obliged to disobey orders requiring them to transgress personal values. In contrast, rule-oriented and role-oriented individuals do not

have the motivational orientation (i.e., does not see oneself as an Origin), and self-efficacy to challenge authority. In their words:

> Whether people possess a sense of personal or political efficacy, in turn, is likely to be related to their perceptions of the primary determinants of their life experiences; whether they see themselves as "origins" or "pawns" in human relations. (Kelman, & Hamilton, 1989, p. 266).

Kelman and Hamilton assert that pawns acquiesce and perceive the authority situation as immutable, immune to being redefined by their own actions. Those who do acquiesce may be extrinsically-oriented and will likely display the same behavioral response to noxious demands: obedience. Effectively, the socialization experiences of those who are rule-oriented and role-oriented induce them to look outwardly to guide their actions (states akin to those described by deCharms and also by Deci and Ryan).

A critical feature of behavioral obedience studies is to coax participants to behave contrary to personally held values and attitudes. For example, participants may be induced to hurt another person (e.g., Bandura et al., 1975), deceive fellow participants (e.g., Festinger, & Carlsmith, 1959), or write counter-attitudinal essays (e.g., Elliot, & Devine, 1994). Bober and Grolnick (1995) adapted Markus's (1977, 1983) self-schema paradigm to research how counter-attitudinal information would affect the self-schemas of people of different motivational orientation. Specifically, Origins and Pawns selected adjectives (e.g., extrovert, introvert) that they considered were accurate self-descriptions and also were important to how them viewed themselves. Later, participants received feedback

that was incongruent with their earlier selections (e.g., introverts were told they were outgoing). When presented with this false (yet supposedly accurate) counter-schematic feedback, Origins were less likely to change their original self-schemas than were Pawns. This means that an Origin's sense of "what kind of person am I?" is relatively resilient compared to that of a Pawn. This being the case, it should be more difficult to coerce Origins to engage in counter-attitudinal behavior as they would not consider themselves to be the type of person who would behave in that manner. Therefore, we might reasonably expect Origins to be less susceptible to authority requests that run counter to self-schemas.

Previous research has also demonstrated that Origins display greater consistency between their attitudes and their behaviors than do Pawns (Deci, and Ryan, 1985; Koestner, Bernieri, & Zuckerman, 1992). The role-oriented nature of a predominantly Pawn-like existence would render a person's sense of self to be more likely to vary according to the particular situation. These malleable self-schemas would render Pawns more pliant and receptive to authority demands (cf. Kelman, & Hamilton, 1989). It might be reasonable to speculate then, that defiant participants of Festinger's and Carlsmith's (1959), of Bandura's (1975), and of Elliot's and Devine's (1994) experiments were more Origin-like than Pawn-like.

Both compliance with and defiance of noxious demands likely induces psychological tension. Previous obedience and cognitive dissonance research illustrates that complying with authoritative dictates that run contrary to one's values, attitudes, or beliefs, should induce an aversive psychological state that may be alleviated through standard dissonance reduction techniques (i.e.,

denigrating the victim, changing one's attitude toward the target issue). We might reasonably suspect that participants required to write a counter-attitudinal essay often choose to ignore the experimenter's instructions and decide to write an essay strongly promoting their true attitudes. In fact they do not (Elliott's and Devine's [1994] defiant participants withdrew from the experiments without writing an essay). For example, recent cognitive dissonance research showed that only one participant wrote an essay in line with true beliefs when asked to write counter-attitudinal essays on issues of race (Lieppe, & Eisenstadt, 1994). Although defiance to authority may involve behaving in accordance with one's own values, attitudes, or beliefs, it too may be accompanied by psychological tension. As mentioned previously, defiance runs counter to socialization experiences that induce people to trust, respect, and obey authority figures. Therefore, behaving in a manner that defies authority may prove to be an aversive experience in itself and lead people who rebel to experience comparable levels of psychological tension to those who comply.

Previous cognitive dissonance research has indicated that participants who are given greater choice regarding their compliance with experimenter's demands experience greater attitude change towards target issues than do participants who are given less choice. However, participants are likely to hold extreme attitudes towards issues that are personally relevant and important (Boninger, Krosnick, & Berrent, 1995), and these attitudes are unlikely to change between initial and subsequent measures regardless of the choice condition to which participants have been assigned (Eagly, & Chaiken, 1995; see also Zanna, & Cooper, 1974). Under

such circumstances, participants would require an alternative strategy to cope with psychological tension arising from complying with, or defying, experimenter's demands.

In addition to techniques of dissonance reduction, people often employ defensive mechanisms (such as denial, and mental or behavioral disengagement) in an attempt to guard against situations that may otherwise impact their sense of self negatively (Block, & Colvin, 1994). On the one hand, many theorists and researchers maintain that over-reliance on defense mechanisms is detrimental to organismic growth and development (Taylor, & Brown, 1988). On the other hand, since Freud, researchers and therapists have acknowledged that defense mechanisms contribute to psychological well-being under stressful conditions (Colvin, & Block, 1994). Moreover, the importance of such mechanisms becomes greater as the power of the situation becomes greater.

Given the greater tension associated with noxious circumstances, people would be expected to employ defensive coping strategies to a greater extent when responding to noxious demands than they would when responding to mundane demands. Both those who comply and those who defy would likely employ defensive mechanisms to mitigate against psychological discomfort, but for different reasons. For the former, people would have acted in accord with their socialization experiences by adhering to authority demands, yet have acted contrary to their own values by acquiescing. Those who defy, however, act in opposition to their socialization by rejecting authority demands, yet act in accord with personal values. Therefore, the compliant and the defiant each would likely

utilize defensive mechanisms despite exhibiting markedly different behavioral responses to the same authority requests.

Overview of predictions and data analyses.

Logistic regression analyses will be used to determine the probability that a specified set of predictor variables influences the likelihood that participants will defy noxious demands. The primary prediction for each of the three following experiments is that participants who self-report Origin-like experiences to be characteristic of their lives will be more likely to defy noxious demands than will participants who self-report Origin-like experiences to be uncharacteristic of their lives. In addition, participants' original attitude to the target issue and the relative degree of autonomy support in the environment (i.e., high- vs. low-choice conditions) conceivably could influence defiant behavior. As such, both original attitudes toward the specific target issue and relative degree of autonomy support are included in the predictor set for all three experiments. In Experiment 2, shyness is added to the predictor set, and in Experiment 3, Social Dominance Orientation is added to the predictor set to determine whether these relevant theoretical concepts help to account for peoples' defiance and compliance. All predictors will be entered into the regression simultaneously.

Other hypotheses common to each of the three studies are exploratory in nature and are intended to add to our understanding of the experience of noxious laboratory circumstances for both those who comply and for those who defy. In effect then, compliance and defiance are treated as organismic variables in a series of exploratory analyses of variance. Enough is not known to make

directional predictions concerning how those who are defiant and those who are compliant would report their experience relative to one another. However, we can assume that noxious demands would stimulate greater defensive coping than mundane demands for both those who comply and those who defy. In the introduction I built the argument that defiance (like compliance) should be accompanied by psychological tension. How that psychological tension (determined by self-report affective measures) differs according to whether participants defy or comply is an empirical question that remains to be answered. Finally, target issues were selected with the purpose of presenting participants with an issue for which they would likely hold an extreme attitude. Therefore, I did not expect a significant degree of attitude change regardless of whether participants had been defiant or compliant, or whether they had been assigned to relatively autonomy supportive (high-choice) or relatively controlling (low-choice) conditions. These final analyses treated defiance/compliance, and choice condition as organismic variables and attitude change as dependent variables.

Experiment 1

Method

Participants and Design

Participants were 50 university students who received research credit toward an introductory psychology course requirement. Participants were assigned randomly either to a condition in which they were reminded of the voluntary nature of research participation (high-choice condition) or to a condition in which they were directed merely to complete the target task and

given no reminder of the voluntariness of research participation (low-choice condition). Experimenters were 14 (10 female, 4 male) graduate and senior undergraduate students.

Procedure

The experimental sessions were conducted with individual participants in order to avoid "defiance contagion" whereby one participant's refusal to continue in the research is the direct result of having witnessed another participant's defiant behavior. The experimenter greeted the participant and asked him or her to sit at a desk. The experimenter sat opposite and indicated that the course research credit would be divided between two separate experiments. The experimenter explained that later the participant would go to another laboratory and participate in another researcher's study. The participant inscribed his or her name and student number on the research credit, and waited for the experimenter to continue.

The experimenter explained that he or she was interested in social cognition, and presented a questionnaire package requiring participants to indicate their attitudes and opinions on a variety of issues concerning themselves and others (i.e., a mundane request). The pseudo-social cognition questionnaire actually constituted the Origin-Pawn Scale (which measured the degree to which participants experienced themselves as causal agents). Finally, on a 15-point scale, participants reported their attitudes toward a variety of issues relevant to students, among which was the target issue of a proposed tuition increase of 20%.

Participants sealed the questionnaire package in an envelope and then completed a separate questionnaire ostensibly provided by the University Vice-

President of Research and Ethics. Participants sealed the questionnaire in a small envelope and dropped it into a box marked "University Ethics Board". The ethics questionnaire actually constituted defensive coping measures of denial, mental disengagement, and behavioral disengagement (see also Knee, & Zuckerman, 1998). Participants then read an ersatz debriefing form that outlined some basic elements of experimental research, but which did not disclose the experimental hypothesis. The experimenter expressed his or her thanks and led the participant to a waiting area located in another hallway.

A second researcher arrived at the waiting area and escorted the participant to a new laboratory. The participant sat at a desk and listened as the experimenter explained that the Department of Psychology had agreed to conduct research on behalf of the University Board of Governors. The experimenter presented the participant with a package containing the tasks and questionnaires relevant to the research and indicated the participant should start (i.e., a noxious request). All participants read the following introductory paragraph (see Elkin, & Lieppe, 1986; Elliot, & Devine, 1994, for analogous procedures):

> The Board of Governors is seriously considering the possibility of increasing tuition by 20% as soon as possible. As such, a committee has been established to investigate the feasibility of a 20% increase in tuition across the entire university. After reviewing what they find, the committee will make a recommendation to the administration regarding the potential tuition increase.

Participants in the low-choice condition then read the following:

You have been assigned to write a strong, forceful essay IN SUPPORT of increasing tuition by 20%. Your essay will be sent directly to the committee for evaluation.

Consent to Participate

I realize what is involved in this task. The essay I write will be sent directly to the committee on campus that will make a decision on tuition based upon the arguments it receives from me and from other students. Sign and date below to agree to participate in the study.

Participants in the high-choice condition read the following:

While we would like to stress the voluntary nature of research participation, the committee is asking you to write a strong, forceful essay IN SUPPORT of increasing tuition by 20%. Your essay will be sent directly to the committee for evaluation.

Consent to Participate

I realize what is involved in this task. I am participating voluntarily, of my own free will. The essay I write will be sent directly to the committee on campus that will make a decision on tuition based upon the arguments it receives from me and from other students. Sign and date below to agree to participate in the study.

Unlike many cognitive dissonance experiments, participants were not given any indication that arguments were being collected on both sides of the tuition issue. Therefore, participants could not assume that another participant in the present study would express their own true opinions adequately. Prior to writing the

essay, participants completed a brief questionnaire to gauge their current feelings (affective measures designed by Elliot and Devine [1994] to indicate participants' psychological discomfort, positive self-impression, and negative self-impressions). Following the two-page space provided for an essay, participants once again indicated their attitude towards the proposed tuition increase and also indicated the amount of choice they felt they had had to write the essay. Participants completed the ethics questionnaire once more (actually the defensive mechanisms inventory), sealed it in an envelope, and dropped it into another box marked "University Ethics Board". Participants were probed carefully for suspiciousness using the funnel interview technique (Cannell, & Kahn, 1968), and were fully debriefed about the nature of the research.

In the event that the participant refused to write the essay, the experimenter asked him or her to complete the remainder of the questionnaires and leave the essay pages blank.

Measures

Defiance. Participants could defy behaviorally in one of two different ways. They could refuse to take any further part in the research by notifying the experimenter of their refusal to consent. Alternatively, participants could be defiant by writing the essay, but in accord with their true attitudes (i.e., in opposition to the tuition increase). Each of the two methods of defiance is legitimate. The first could be looked at as a form conscientious objection, whereas the second accepts the means through which change can occur but rejects the particular perspective that participants are being compelled to promote.

Personal causation. Participants' perceptions of personal causation in daily life were assessed using the Students Origin-Pawn Scale developed specifically for this research.[1] The scale has high face validity, items being taken from deCharms' (1968) descriptions of Origin experiences in his original work, personal causation. Over a variety of domains, items tapped participants' perceptions of their relative sense of freedom, constraint, motivation to engage in tasks, enjoyment of tasks, personal investment in tasks, purposeless, and relative sense of future success. Participants indicated on a 9-point scale (1= strongly disagree, 9 = strongly agree) whether each of 20 statements is characteristic of them and their experience in life. See Appendix for full version of Origin-Pawn Scale.

Psychological discomfort and affect. Participants indicated their relative psychological discomfort, positive feelings about themselves, and negative feelings about themselves on a series of items developed by Elliot and Devine (1994) to serve as a manipulation check in cognitive dissonance research. Participants were instructed to indicate how they felt at that moment by circling a number on a 7-point scale, where 1 = does not apply at all, and 7 = applies very much. Psychological discomfort was measured by averaging participants' responses to items requiring them to indicate the degree to which they were uncomfortable, uneasy, and bothered. Negative feelings towards self were measured by averaging responses to items requiring participants to indicate how self-critical, guilty, disappointed with themselves, annoyed with themselves, angry towards themselves, dissatisfied and disgusted with themselves they were.

Positive feelings were measured by averaging participants' responses to items indicating how happy, good, friendly, energetic, and optimistic they felt.

Defensive coping. I adapted three subscales from the COPE inventory (Carver, Scheier, and Weintraub, 1989) that measure defensive coping. Items representing denial (e.g., "I said to myself I can't really be doing this"), mental disengagement (e.g., "my mind wandered to other things"), and behavioral disengagement (e.g., "I gave up trying to do a good job") were used to assess participants' strategies for dealing with the specific task they were asked to complete during both mundane and noxious phases of the experiment. Responses were scored on a 9-point Likert scale (1 = strongly disagree; 9 = strongly agree). Participants completed the COPE inventory after reading the following instructions:

> The University of Alberta recently implemented new guidelines for the ethical treatment of research participants. We would like to gain feedback on the subjective experiences of undergraduate students who participate in University of Alberta research programs. Please respond to the following questionnaire regarding your current research experience.

Results

Gender. Gender of participant was not included in the final analyses as men and women did not differ in the degree to which they reported experiencing life as Origins and did not differ in the extent to which they either defied or complied with experimenter's demands. Moreover, participants showed the same level of defiance regardless of whether the experimenter was male or female.

Choice manipulation check. One-way analysis of variance of participants' perceptions of choice in writing or not writing the essay yielded a significant effect, $F(1, 48) = 4.43$, $p \leq .05$. Those assigned to the high-choice condition expressed greater choice ($M = 11.52$, $SD = 4.69$) than did those who were assigned to the low-choice condition ($M = 8.60$, $SD = 5.11$).

Personal causation. Participants' total score on the Students Origin-Pawn Scale served as the measure for personal causation (Cronbach's alpha = .89). Scores could range from 20 to 180. The actual range obtained was 57-170 ($M = 104.76$, $SD = 24.04$). Origins (determined by median split of 104 and above) perceived themselves to have greater choice about how to act ($M = 11.72$, $SD = 4.82$) when confronted with noxious demands than did Pawns ($M = 8.40$, $SD = 4.86$), $F(1, 48) = 5.88$, $p \leq .05$.

Predictor set and likelihood of defiance. Logistic regression showed that the predictor set (Origin scores, original attitudes towards the tuition increase, and whether participants were in the high- or the low-choice condition) was significantly associated with defiance $\chi^2 (3, N = 50) = 9.36$, $p < .05$. Higher self-reported levels of Origin-like experiences were associated with greater likelihood of defiance ($B = .04$, $SE = .02$, odds ratio [OR] = 1.04, Wald = 6.10, $p < .02$). However, neither of the other predictor variables were significantly associated with defiance (Wald < 1.30, ns).

As Table 1 shows, 14 defiant participants chose to write an essay in opposition to the proposed tuition increase and 15 defiant participants refused to give their consent to participate. However, specific contrasts indicated that those who

refused to participate in the research were not more likely to report greater levels of Origin experiences (M = 119.66, SD = 29.29) than those who continued to participate, but chose to write an essay in opposition to the increase (M = 109.83, SD = 22,96), t (1, 48) = 1.07, p = .29, ns. Neither Origins nor Pawns were more likely to defy in the high-choice condition than they were in the low-choice condition.

Psychological discomfort and affect indices. Defiant participants (M = 10.26, SD = 6.18) did not differ from compliant participants (M = 10.43, SD = 4.88) in the degree to which they experienced psychological discomfort F (1, 48) = .012, p = .913, ns. In addition, there were no differences in the degree to which defiant participants and compliant participants experienced negative feelings towards themselves, or the degree to which they felt positive about themselves, Fs < 1, ns.

Attitude change. There were no differences in attitude change for participants in the high-choice condition (M = -0.28, SD = 1.10) compared to participants in the low-choice condition (M = -0.28, SD = 1.62), or for defiant participants (M = -0.14, SD = 0.66) versus compliant participants (M = -0.43, SD = 1.90), Fs < 1, ns.

Defensive coping. Defiant participants reported using specific defensive coping strategies to a greater extent when responding to noxious demands than they did when responding to mundane demands. Denial (M = 11.07, SD = 7.96) and behavioral disengagement (M = 10.00, SD = 7.49), were employed more during the second phase of the experiment than at the first stage of the experiment (M = 5.89, SD = 2.56; M = 6.33, SD = 2.79 respectively), ts (26) > 2.92, p < .007. In contrast, defiant participants were no more likely to employ mental

disengagement strategies (e.g., daydreaming) during the noxious phase (M = 24.56, SD = 8.69) than they were during the mundane phase of the experiment (M = 23.93, SD = 8.26), t = .38, p = .71, ns. Similarly, compliant participants reported greater denial (M = 10.13, SD = 8.40) under noxious conditions than under mundane conditions (M = 6.91, SD = 4.23), t (22) = 2.32, p < .03, and also reported greater behavioral disengagement (M = 11.78, SD = 5.79) under noxious conditions than under mundane conditions (M = 6.74, SD = 3.63), t (22) = 4.33, p < .00 . They also reported no greater mental disengagement under noxious conditions (M = 25.96, SD = 6.76) than under mundane conditions (M = 24.91, SD = 6.42), t (22) = .63, p = .54, ns. Defiant and compliant participants did not report employing significantly different levels of any of the defensive strategies in either mundane or noxious circumstances, Fs < 1.40, ns.

Experiment 2

The first experiment indicated that a substantial proportion of participants refused to comply when asked to do something that required them to act contrary with their attitudes. Also, people who reported Origin experiences to be characteristic of their life were more likely to defy noxious authority demands than were those who reported Origin experiences to be less characteristic of their life. This suggests that Origins are indeed less bound by extrinsic contingencies and externally-imposed requirements even in obedience situations.

Those who defied noxious demands experienced similar levels of psychological discomfort as those who complied. Previous research concerning obedience research has emphasized the degree of anxiety and tension experienced

by compliant participants in Milgram's series of dramatic studies (e.g., Blass, 1991). Such tension may be interpreted by viewers of Milgram's Obedience film as a fascinating instance of people continuing to behave in a manner that causes personal discomfort. Viewers may ask themselves why people continued to behave contrary to their values if it caused so much distress. It may be that the alternative option is no more appealing in terms of personal affective state; defying an authority and acting in accord with one's own beliefs may result in similar levels of discomfort as complying and acting contrary to one's beliefs. The comparable psychological discomfort of defiant and compliant participants is mirrored in the extent to which members of these groups use defensive coping strategies. Both those who defied and those who complied reported having used denial, and behavioral disengagement, to a greater extent when faced with a noxious request than when faced with a typical mundane experimental request. These results suggest that people use defensive mechanisms to cope with potentially dissonant actions in addition to the well-researched strategies of changing one's attitude toward the target issue and/or attributing responsibility for the behavior to the experimenter.

Defiance rates were considerably higher than those reported in the field of cognitive dissonance (e.g., Elliot, & Devine, 1994; Lieppe, & Eisenstadt, 1994) from which I adopted my procedures. There are a number of differences, however, between traditional dissonance procedures and those employed in the current research. Dissonance researchers typically lead participants to believe they are collecting arguments both for and against an imminent increase in tuition

(whereas participants in the current research were given no information that would suggest the Board of Governors was interested in receiving balanced arguments). Typically, participants indicate their attitude towards the proposed increase, are asked to write an essay in favor of the increase, and are then asked to indicate their attitude towards the increase once again. Previous researchers have used proposed tuition increases that barely exceeded normal rates. While students would be expected to oppose any increase, they might also justify writing a counter-attitudinal essay by telling themselves, "the increase that's being proposed is not so much more than the normal increase anyway." In the present study, however, participants were asked to indicate their attitude towards an imminent tuition increase that far exceeded standard rates of inflation. Interestingly, autonomy-supportive circumstances (i.e., the high-choice condition that was perceived by participants to allow greater choice) were not more likely to be associated with higher levels of defiance than were more restrictive circumstances (i.e., the low-choice condition). Why might this be? It is possible that the extreme nature of the proposed tuition increase was such that low-choice conditions were not sufficiently restrictive to quash the intentions of would-be deviants to refuse to acquiesce. For their part, Pawns are told what to do in each condition, and comply, and Origins may feel strongly enough about the issue in each condition to defy.

Although participants could defy in one of two different ways, they were as likely to refuse to consent to participate in the research as they were to write an essay in opposition to the tuition increase. These two different modes of defiance

might be considered to have different potential consequences. On the one hand, an outright refusal to consent might be considered a more emphatic demonstration of defiance than writing an essay in opposition to the tuition increase. Participants who refused to consent directly acknowledged their defiance to the experimenter by indicating that they were withdrawing from the research. In contrast, participants who wrote an essay in opposition to the tuition increase, defied without the experimenter ever being aware of that defiance. Participants were under the impression that they would be debriefed as soon as they had completed the essay and the additional questionnaire from the University Ethics Board. They also believed that their essays would immediately be sent to the Board of Governors for examination. Therefore, it could be argued that some participants might have realized that they could act in accord with their own values, yet avoid acknowledging their decision to the experimenter. However, those who chose to write a defiant essay and submit it to the Board of Governors also submitted their name and student number, actions that serve to increase personal accountability. Hence, writing a defiant essay could be seen as an equally emphatic demonstration of agency as a direct refusal to participate further. In fact, of the two modes of defiance, submitting a defiant essay is the one that leads to the power brokers (ostensibly the Board of Governors) supposedly being confronted with noncompliant actions.

Experiment 2 was designed to determine whether the impressive rates of defiance in Experiment 1 would be replicated if participants were required to acknowledge their defiant stand to the experimenter regardless of whether they

had chosen to refuse to participate or whether they had chosen to write a defiant essay. Moreover, I was interested to see if participants would continue to write defiant essays if the personal accountability were made higher than in the first experiment. In Experiment 2, participants were asked to write a counter-attitudinal essay and read it while being videotaped. The videotape and essay would then be sent to the Board of Governors for evaluation. Cheek's and Buss's (1981) Shyness Inventory was also administered to determine whether defiant participants who refused to read their essay while being videotaped were simply shy (as opposed to Origin-like).

Method

Participants and Design

Participants were 50 university students who received research credit toward an introductory psychology course requirement. Participants were assigned randomly either to a condition in which they were reminded of the voluntary nature of research participation (high-choice condition) or to a condition in which they were directed merely to complete the target task and given no reminder of the voluntariness of research participation (low-choice condition). Experimenters were 14 (10 female, 4 male) graduate and senior undergraduate students.

Procedure

The cover story and procedure were identical to that in Experiment 1. Laboratory arrangements were similar to those in Experiment 1 (with the addition of a video-camera in the second laboratory), and the same dependent measures

were used (with the addition of Cheek's & Buss's, 1981, Shyness Inventory in the disposition measures completed in the first laboratory). The experimenter sat opposite the participant and indicated that the course research credit would be divided between two separate experiments. The experimenter explained that later the participant would go to another laboratory and participate in another researcher's study. The participant inscribed his or her name and student number on the research credit, and waited for the experimenter to continue.

In the first laboratory the experimenter asked the participant to complete the research credit sheet, and then replicated the mundane request for the participant to complete a pseudo-social cognition questionnaire (actually the disposition measures and Cheek's & Buss's Shyness Inventory). When the participant had finished, the experimenter asked that the questionnaire ostensibly provided by the University Ethics Board (actually the inventory for defensive coping measures) also be completed. The participant then read the ersatz debriefing form, was thanked for his or her help and was led to the waiting area in a separate hallway.

A second researcher escorted the participant to a different laboratory and seated him or her at a desk. A tripod-mounted video camera was pointed directly at the participant's chair from a position of 2.0m. The experimenter sat opposite the participant, with the camera pointed above his or her head. As in Experiment 1, the experimenter explained the research being conducted on behalf of the Board of Governors, and presented the participant with a package of materials explaining that he or she had been assigned to write a strong forceful essay in

support of increasing tuition by 20%. Participants in the low-choice condition read that they had been assigned to write a supportive essay. In contrast, participants in the high-choice condition read that the committee would like to stress the voluntary nature of research participation, and that they were being asked to write the essay in support of a tuition increase. The instructions for both conditions continued:

> In addition, you will be videotaped reading the main points of your essay. Your essay and videotape will be sent directly to the Committee for evaluation.

Participants in the low-choice condition were then directed to sign the consent form, acknowledging that they understood the essay and videotape would be reviewed by the Board of Governors and used to inform their decision on the imminent tuition increase. The wording of the consent form for those in the high-choice condition emphasized that participation was voluntary and that the participant's decision to write the essay and be videotaped was based on his or her own free will.

Once again, participants were not given any indication that arguments were being collected on both sides of the tuition issue. As in Experiment 1, participants completed a brief questionnaire to gauge their psychological discomfort, positive self-impression, and negative self-impression. Following the two-page space provided for an essay, participants indicated their attitude towards the proposed tuition increase, and indicated the amount of choice they felt they had had to write the essay. Participants then completed the ethics questionnaire

once more (actually the defensive mechanisms inventory), before informing the experimenter they were ready to read their essay. The experimenter pressed "play" on the recorder so that the machine appeared to be recording. Participants refusing to take part in the research were asked to complete the questionnaire and leave the essay pages blank. All participants were probed for suspiciousness and fully debriefed about the nature of the research.

Results

Choice manipulation check. Participants assigned to the high-choice condition perceived themselves to have greater choice (M = 12.40, SD = 4.36) to write or not write the essay than did those who were assigned to the low-choice condition (M = 8.84, SD = 6.05),

$F(1, 48) = 5.69$, $p \leq .05$.

Personal causation. Internal reliability analyses for the Students' Origin-Pawn Scale of personal causation yielded Cronbach's alpha of .86. Participants' scores ranged from 39-150 (M = 113.72, SD = 20.59). Origins (determined by median split of 118 and above) did not perceive themselves to have greater choice about how to act (M = 11.44, SD = 5.08) when confronted with noxious demands than did Pawns (M = 9.80, SD = 5.92), $F(1, 48) = 1.11$, $p = .29$, ns.

Predictor set and likelihood of defiance. Logistic regression showed that the predictor set (Origin scores, shyness, original attitudes towards the tuition increase, and high- vs. low-choice condition) was associated with defiance at a marginally significant level χ^2 (4, N = 50) = 8.81, p = .07. Higher self-reported Origin scores were associated with greater likelihood of defiance (B = .05, SE =

.02, OR = 1.05, Wald = 4.87, p < .05). However, none of the other predictor variables were significantly associated with defiance (Wald < 2.20, ns).

As Table 2 indicates, 21 defiant participants refused to give their consent to participate and 7 chose to write an essay in opposition to the proposed tuition increase. Specific contrasts indicated that those who refused were not more likely to report greater levels of Origin experiences (M = 120.71, SD = 7.30) than those who wrote an essay in opposition to the increase (M = 118.65, SD = 19.17), t (1, 48) = -.23, p = .82, ns. Neither Origins nor Pawns were more likely to defy in the high-choice condition than they were in the low-choice condition.

Psychological discomfort and affect indices. Defiant participants (M = 13.46, SD = 4.88) and compliant participants (M = 12.31, SD = 4.62) reported similar levels of psychological discomfort F (1, 48) = .71, p = .913, ns. In addition, defiant participants did not feel more negative about themselves (M = 16.07, SD = 9.04) than compliant participants (M = 12.05, SD = 5.30), F (1, 48) = 3.43, p = .70, ns. Finally, there were no differences in the degree to which defiant participants and compliant participants felt positive about themselves, F = 1.74, ns.

Attitude change. There were no differences in attitude change for participants in the high-choice condition (M = .44, SD = 1.16) compared to participants in the low-choice condition (M = .80, SD = 1.38), or for defiant participants (M = .50, SD = 1.14) versus compliant participants (M = .77; SD = 1.45), Fs < 2.1, ns.

Defensive coping. Defiant participants reported using specific defensive coping strategies to a greater extent when responding to noxious demands than they did when responding to mundane demands. Denial (M = 12.68, SD = 8.45) and

behavioral disengagement (M = 16.32, SD = 7.29), were employed more during the second phase of the experiment than at the first stage of the experiment (M = 6.67, SD = 3.02; M = 13.75, SD = 3.13 respectively), t (27) = 3.58, p < .001; t (27) = 2.09, p = .046. However, defiant participants were no more likely to employ mental disengagement strategies (e.g., daydreaming) during the noxious phase (M = 28.93, SD = 6.14) than they were during the mundane phase of the experiment (M = 27.11, SD = 5.04), t (27) = 1.64, p = .11, ns. Similar to their defiant counterparts, compliant participants reported greater denial (M = 11.59, SD = 7.57) under noxious conditions than under mundane conditions (M = 5.55, SD = 2.94), t (21) = 4.52, p < .000, and also reported greater behavioral disengagement (M = 16.00, SD = 5.01) under noxious conditions than under mundane conditions (M = 13.05, SD = 1.59), t (21) = 2.90, p < .009 . They also reported no greater mental disengagement under noxious conditions (M = 28.05, SD = 5.64) than under mundane conditions (M = 27.95, SD = 5.59), t (21) = .07, p = .94, ns. Defiant and compliant participants did not report employing significantly different levels of any of the defensive strategies in either mundane or noxious circumstances, Fs < 1.60, ns.

Additional shyness data. Specific contrasts indicated that those who refused to participate in the research were not more likely to report greater levels of shyness (M = 16.80, SD = 5.43) than were those who wrote an essay in opposition to the increase and read it while being videotaped (M = 14.29, SD = 5.88), t (1,48) = -.99, p = .34, ns. In addition, those who refused to take part in the experiment did not report higher discomfort of appearing on videotape (M = 2.50, SD = 1.39)

than did those who wrote in opposition to the tuition increase and read the essay while being videotaped (M = 1.71, SD = 1.70), t (1,48) = -1.09, p = .30, ns

Experiment 3

Once again, a substantial proportion of participants refused to comply when asked to endorse a large, imminent tuition increase. In keeping with Experiment 1, defiant participants reported greater Origin-like experiences than did compliant participants. Also, participants perceived themselves to have greater choice in the high-choice condition as compared to the low-choice condition, and defiant and compliant participants reported similar levels of psychological discomfort, defensive coping, and attitude change (as they had done in Experiment 1). The discomfort of those reading an essay in front of the videocamera was demonstrated frequently both by those who complied and by those who defied the experimenter. One defiant participant finished reading her essay, sat back in her chair, and said, "that was hard." Later, the experimenter asked, "you said it was a hard thing to do, so why did you do it?" To which she replied, "I saw a video in high-school with a man in a white coat asking people to give someone an electric shock. I realized I would have as he'd asked and told myself I wouldn't be that way any more."

There were some important differences between Experiment 1 and Experiment 2. In Experiment 1, the majority of defiant participants chose to write an essay in accord with their true beliefs, an option that allowed their defiance to remain hidden from the experimenter. In Experiment 2, all defiant participants acknowledged their choice to the experimenter regardless of which defiant

method they had adopted. The dominant mode of defiance in Experiment 2 was an outright refusal to participate. Twenty defiant participants refused to participate in the research, compared to only seven who chose to write an essay in opposition to the proposed increase and also be videotaped reading that essay. One possible explanation would be that people who defied by reading an essay against the tuition increase in front of the videocamera were less shy and/or less uncomfortable being videotaped. The results showed this not to be true. Moreover, defiant participants were no less shy or uncomfortable than those who had chosen to comply with the experimenter's request. It may be then, that people are more likely to choose a defiant option that allows them to retain some form of anonymity, or allow them to defy while also escaping detection. The videocamera ensured that those reading a defiant essay would both acknowledge their actions visually to the experimenter and the Board of Governors.

The presence of the video-camera might also have affected other dimensions of the study. Unlike Experiment 1, Origins did not perceive themselves to have more choice to write or not to write the prescribed essay than did Pawns. The presence of the video-camera might have increased self-awareness processes in Pawns to a similar level to that of Origins (cf. Gibbons, 1990). Therefore, people reporting lower Origin experiences might also have experienced greater pressure to act in accord with their true beliefs. Experiment 2 offered some support for the results obtained in Experiment 1. However, some important features of the first study were not replicated. In the final experiment I was interested to see whether the original results would be reproduced if the

original study were replicated with a target issue that would require defiance on behalf of someone else. Would the defiance rate of Origins decrease with an issue that did not impact self-interest?

Immediately prior to the research the Globe and Mail daily newspaper and the Canadian Television company commissioned the Angus Reid Group to survey Canadians' attitudes towards granting same-sex couples the same legal status as heterosexual couples by recognizing marriage (the Globe & Mail, June 10, 1999). The majority (53%) of Canadians indicated they believed that gay and lesbian couples should be able to wed legally. Nationwide, opposition to the proposition was highest in the province of Alberta (56% objected to legal homosexual union), although college aged people (18-34 years) were the most supportive of the proposed legislation (66% were supportive).

Social dominance orientation (SDO) is considered to be the central individual difference variable that predicts acceptance or rejection of policies relevant to social equality, that is, the relative structural relationships between groups (Pratto, Sidanius, Stallworth, & Malle, 1994). Essentially, SDO reflects an individual's preference for intergroup relations to be equal or hierarchical. People high in SDO have been shown to be more likely to oppose legislation that aims to enhance the status of underprivileged groups such as African Americans (Sidanius, Devereux, & Pratto, 1992; Sidanius, Pratto, & Bobo, 1996) and homosexuals (Whitley, 1999). Pratto, et. al. (1994) postulated that:

> another kind of research endeavor that could further show the dynamic link between SDO and societal oppression would use SDO to predict

> attitudes toward new ideologies or policies....the operation of SDO in the invention of new legitimizations and processes that assort persons into hierarchy roles may inform studies of political and social change. (p. 755).

According to the rationale I have developed thus far, people of high SDO would be expected to oppose social practices that reduce group inequality when asked to indicate their attitude toward the new social policy, but would only oppose the policy behaviorally if they consider themselves to be people who will not be dictated to by others (i.e., Origin-like). Therefore, I expect those of lower SDO to support same-sex marriages and those of higher SDO to oppose same-sex marriages. However, those who report being more Origin-like should be more likely to defy the experimenter than their similarly egalitarian Pawn-like counterparts. The rhetoric surrounding "Origins" and "rebels" is commonly slanted in a positive fashion. However, I also expect that being Origin-like is insufficient for a person to intervene to prevent a marginalized group from being discriminated against. Origins can be as bigoted or tyrannical as anyone else. As such, Origin scores would not be expected to discriminate between those who support and those who oppose same-sex marriages.

Method

Participants and Design

Participants were 72 university students who received research credit toward an introductory psychology course requirement. Participants were assigned randomly either to a condition in which they were reminded of the voluntary nature of research participation (high-choice condition) or to a

condition in which they were directed merely to complete the target task and given no reminder of the voluntariness of research participation. Experimenters were 14 (10 female, 4 male) graduate and senior undergraduate students.

Procedure

The cover story, procedure, and laboratory arrangements were identical to those in Experiment 1. Also, the same dependent measures were used (with the addition of the Social Dominance Orientation scale to the disposition measures completed in the first laboratory). The experimenter sat opposite and indicated that the course research credit would be divided between two separate experiments. The experimenter explained that later the participant would go to another laboratory and participate in another researcher's study. The participant inscribed his or her name and student number on the research credit, and waited for the experimenter to continue.

In the first laboratory the experimenter explained the research hour would be split between two separate studies, asked the participant to complete the research credit sheet, and then replicated the mundane request for the participant to complete a pseudo-social cognition questionnaire (actually the disposition measures and the Social Dominance Orientation scale). The participants also indicated their attitudes towards a variety of issues relevant to students on a 15-point scale. The target item for the current experiment required participants to indicate their support for, or objection to, legalization of same-sex marriage. When the participant had finished, the experimenter asked that the questionnaire ostensibly provided by the University Ethics Board (actually the inventory for

defensive coping measures) also be completed. The participant then read the ersatz debriefing form, was thanked for his or her help and led to the waiting area in a separate hallway. The experimenter returned to the laboratory, opened the participant's questionnaire package and determined whether the participant supported or opposed same-sex marriage. Then, the experimenter called the second researcher via cell-phone and instructed him or her to place the appropriate counter-attitudinal instructions on the participant's desk in the second laboratory. For instance, a participant supporting same-sex marriage would be presented with a package indicating that he or she should write an essay in opposition to homosexual rights. No indication was given to the second experimenter regarding the degree to which the participant supported or opposed the proposition.

Having placed the appropriate package on the participant's desk in the second laboratory, the second researcher left to meet the participant in the hallway. The participant was accompanied back to the laboratory and asked to have a seat at the desk. The experimenter sat opposite the participant, explained that the Department of Psychology had agreed to conduct research on behalf of the Government, and presented the participant with a questionnaire package. All participants read the following introductory paragraph:

> Currently, a governmental subcommittee is investigating whether homosexual couples should have the same rights as heterosexual couples. Presently, homosexual couples cannot legally be married. As such, the Board of Governors has established a committee to investigate students'

opinions of same-sex marriages. After reviewing what they find, the committee will make a recommendation to the government regarding the status of same-sex relationships.

Participants were then assigned to write a strong forceful essay in opposition to their true beliefs about same-sex marriages (the noxious request was phrased either with high-choice or low-choice wording). The instructions indicated that the essay would be sent directly to the committee for evaluation. Participants were then directed to sign the consent form, acknowledging that they understood the essay would be reviewed by the Board of Governors and used to inform their recommendation to the government.

As in the first two experiments, participants were not given any indication that arguments were being collected on both sides of the issue. In addition, participants completed a brief questionnaire ostensibly to gauge their psychological discomfort, positive self-impression, and negative self-impression. Following the two-page space provided for an essay, participants indicated their attitude towards same-sex marriage, and indicated the amount of choice they felt they had had to write the essay. Participants then completed the ethics questionnaire once more (actually the defensive mechanisms inventory), before being probed for suspiciousness and fully debriefed about the nature of the research.

Results

Of the 72 participants, 54 indicated support for same-sex couples being able to wed legally, and 18 opposed same-sex couples being able to wed legally (determined on the basis of responses to the appropriate 15-point Likert scale).

Support vs. opposition to same-sex legislation. Those participants who expressed lower social dominance orientation (i.e., were more egalitarian) were more likely to support same-sex marriages (B = -.04, SE = .02, OR = .95, Wald = 4.26, $p < .05$). Reporting Origin-like experiences as being characteristic of one's life was not predictive of supporting same-sex marriages (B = .01, SE .01, OR = 1.00, Wald = .21, $p = .65$, ns).

Personal causation. Origins perceived having more choice (M = 12.19, SD = 3.26) than did Pawns (M = 9.72, SD = 4.84), F (1, 70) = 6.47, $p \leq .02$.

Predictor set and likelihood of defiance. Logistic regression showed that the predictor set (Origin scores, social dominance orientation, original attitudes towards the proposed legislation, high- vs. low-choice condition, and whether participants favored or opposed same-sex marriages) was significantly associated with defiance χ^2 (5, N = 72) = 14.78, $p < .02$. Higher self-reported Origin scores were associated with greater likelihood of defiance (B = .04, SE = .02, OR = 1.04, Wald = 6.27, $p < .02$). Participants who supported same-sex marriages showed a greater likelihood to defy experimenter's demands to a marginally significant level (B = 2.40, SE = 1.4, OR = 11.13, Wald = 2.92, $p = .09$). However, none of the other predictor variables were significantly associated with defiance (Wald < .50, ns).

Psychological discomfort and affect indices. Defiant participants felt less negative about themselves (M = 10.76, SD = 5.47) in whether or not to write the essay than did compliant participants (M = 15.31, SD = 8.18), F (1, 70) = 7.79, $p \leq .01$.

People in favor of same-sex marriage

The following results refer solely to those 54 participants who indicated support for same-sex couples being able to wed legally (2 of these participants reported being bisexual and 1 of whom reported being lesbian).

Choice manipulation check. One-way analysis of variance of participants' perceptions of choice in writing or not writing the essay yielded a significant effect, F (1, 52) = 6.53, $p \leq .02$. Those assigned to the high-choice condition expressed greater choice (M = 12.22, SD = 3.57) than did those who were assigned to the low-choice condition (M = 9.37, SD = 4.58).

Personal causation. Internal reliability analyses for the Students' Origin-Pawn Scale yielded Cronbach's alpha of .87. Participants' scores ranged from 55-160 (M = 111.96, SD = 20.81). Origins (determined by a median split of 110 or above) perceived themselves to have greater choice about how to act (M = 12.41, SD = 2.88) when confronted with noxious demands than did Pawns (M = 9.19, SD = 4.91), F (1, 52) = 8.63, $p \leq .01$.

Predictor set and likelihood of defiance. Logistic regression showed that the predictor set (Origin scores, social dominance orientation, original attitudes towards the tuition increase, and high- vs. low-choice condition) was not significantly associated with defiance χ^2 (4, N = 54) = 7.30, p = .12. Higher self-reported Origin scores were marginally associated with greater likelihood of

defiance (B = .03, SE = .02, OR = 1.03 Wald = 3.32, p = .07). None of the other predictor variables were significantly associated with defiance (Wald < 1.20, ns).

As Table 3 indicates, 11 defiant participants refused to give their consent to participate and 13 defiant participants chose to write an essay in opposition to the proposed legislation. Specific contrasts revealed no differences in the extent to which defiant participants reported Origin experiences as being characteristic of their life regardless whether they had refused to participate (M = 125.00, SD = 14.84) or written an essay in opposition to the increase (M = 113.17, SD = 20.90), t (1, 52) = 1.47, p = .15, ns.

Psychological discomfort and affect indices. Defiant participants (M = 11.42, SD = 6.55) did not differ from compliant participants (M = 9.30, SD = 5.15) in the degree to which they experienced psychological discomfort F (1, 52) = 1.77, p = .19, ns. In addition, there were no differences in the degree to which defiant participants and compliant participants felt positive about themselves, F < 1, ns. However, defiant participants reported feeling significantly less negative about themselves (M = 10.46, SD = 5.14) than their compliant counterparts (M = 15.80, SD = 8.26), F (1, 52) = 7.65, p ≤ .01.

Attitude change. There were no differences in attitude change for participants in the high-choice condition (M = 1.70, SD = 2.16) compared to participants in the low-choice condition (M = 1.70, SD = 1.98), or for defiant participants (M = 1.33, SD = 1.86) versus compliant participants (M = 2.00; SD = 1.18), Fs < 2.2, ns.

Defensive coping. Defiant participants reported using specific defensive coping strategies to a greater extent when responding to noxious demands than they did

when responding to mundane demands. Denial (M = 9.62, SD = 6.32) and behavioral disengagement (M = 9.50, SD = 5.68), were employed more during the second phase of the experiment than at the first stage of the experiment (M = 5.88, SD = 2.56; M = 6.33, SD = 3.82 respectively), ts (23) > 3.30, ps < .01. In contrast, defiant participants were no more likely to employ mental disengagement strategies (e.g., daydreaming) during the noxious phase (M = 21.88, SD = 6.26) than they were during the mundane phase of the experiment (M = 20.71, SD = 7.07), t (23) = .73, p = .47, ns. Similarly, compliant participants reported greater denial (M = 10.00, SD = 6.16) under noxious conditions than under mundane conditions (M = 6.10, SD = 2.90), t (29) = 3.65, p < .01, and also reported greater behavioral disengagement (M = 10.50, SD = 7.17) under noxious conditions than under mundane conditions (M = 6.73, SD = 3.44), t (29) = 2.60, p < .02. They also reported no greater mental disengagement under noxious conditions (M = 23.23, SD = 6.81) than under mundane conditions (M = 24.63, SD = 7.07), t (29) = 1.16, p = .26, ns. Defiant and compliant participants did not report employing significantly different levels of any of the defensive strategies in either mundane or noxious circumstances, ts < 1.7, ns.

People opposed to same-sex marriage Of the original 72 participants, 18 indicated that they opposed same-sex couples being able to wed legally. Although the total number of oppositional participants was quite small for meaningful statistical analyses, the following results refer to those 18 participants.

Interestingly, 13 of the 18 participants in this group chose to defy (5 by refusing to consent to participate, and 8 by writing an essay in accord with their

true beliefs). Eight of nine Origins defied, and five of nine Pawns defied. The same set of predictor variables used for participants who supported same-sex marriages showed no association with defiance for those who opposed the proposed legislation χ^2 (4, N = 18) = 5.71, p = .22. Participants' Origin scores showed the closest association with defiance (B = .07, SE = .05, OR = 1.07, Wald = 2.2, p = .14). No other predictor variable showed any association with defiance, Walds < .61, ns. There were no differences between defiant participants and compliant participants for attitude change or for any subscale of psychological discomfort, positive self-impression, or negative self-impression, all Fs < .80, ns.

General Discussion

The current studies indicated that relatively high proportions of people will defy experimenters' requests in standard obedience research. In keeping with Kelman's and Hamilton's (1989) contention, people reporting Origin-like experiences were more likely to be defiant than those reporting Pawn-like experiences. As with previous research (e.g., Eagly, & Chaiken, 1995), initial attitudes towards the target issues were sufficiently strong to result in negligible attitude change for participants of either choice condition. This phenomenon was reflected behaviorally in that participants were as likely to defy in the low-choice condition as they were in the high-choice condition. Origins showed greater consistency between their attitudes and behaviors in that they were more likely to refuse to comply with experimenters' demands.

As noted earlier, authority figures (such as parents and teachers) provide us with valuable guidance. However, this process creates a double-edged sword:

on the one hand we learn to trust and respect authorities. On the other hand, an individual's development can become enmeshed in a process that severely limits the capacity for autonomy. Foucault (1977) argued that contemporary social structures exert pervasive authority on individuals. He considered the effect to be extreme in that people become excessively obedient and automatically function according to externally determined habits, rules and orders. In contrast, Deci and Ryan (1987) asserted that social structures within which internalization occurs do not in themselves result in the automatic introjection of habits, rules, and orders. Rather, they suggest that the manner in which the individual experiences internalization influences the degree to which that person functions autonomously. Recall that deCharms (1968) described the Origin experience as one of personal agency. Over time, repetition of autonomy supportive internalization experiences would be expected to nurture dispositional Origin-like qualities (see also Amabile, 1990). Seeing oneself as a self-determined individual seems to be an important dimension for tackling undesirable authority. Indeed, Bourdieu (2000) has claimed that the dominance of the authoritative social order maintains its status only as a result of perceptual schemas that see the hierarchical structure, and one's place within that structure, as lacking alternatives. So, perceiving oneself to have no personal choice about how to act when faced with authority demands serves to petrify existing institutional structures, social expectations, and subsequent personal behavior. In the present experiments, Origins are less easily influenced by objective indications of coercion than are Pawns. They were less susceptible to external control, adopted an active stance in

the face of noxious pressure to comply, and also perceived themselves to have greater choice about how to act.

Previously, parallels have been drawn between laboratory studies of obedience (e.g., Milgram's electric shock experiments; Zimbardo's "Stanford Prison Experiment) and inconceivably dire, yet real, "crimes of obedience" (e.g., concentration camp brutality). It is with caution, however, that I present the following example as the circumstances and consequences of deviance in my laboratory experiments did not pretend to generalize to concentration camp conditions. Bettelheim's (1943) psychoanalytic account of prisoners' individual and collective behavior at both Dachau and Buchewald offered few prescriptions for protecting oneself against extreme forces of socialization such as Naziism. However, he informed us that those who, when free, had completely and mindlessly introjected the "wisdom" of the ruling authority, fared the worst in their new incarcerated predicament (the period of relatively normal imprisonment that commonly preceded the torturous "welcome" at the concentration camps). What is more, these prisoners' previous style of passive acceptance would not have lent itself to developing deeper critical awareness of noxious cultural practices. In fact, Bettelheim claimed that these people's poor adaptation could be attributed to them having no personally constructed philosophical or critical framework to help them interpret their fate (as was the case with "political prisoners"). Moreover, they could not conceive of any form of opposition or any form of resistance as they would likely have perceived their form of persecution to be correct generally since it had been sanctioned appropriately. In <u>their specific</u>

case though, they would have believed that the authorities must have made some kind of mistake. Bettelheim believed that these people would have benefited from having the capacity to defy in some small way, as defiance would, at least, have provided a measure of self-esteem. In fact, the psychological state of these individuals led them to be the most likely to disintegrate as self-determined persons and also be the most likely to commit suicide (Bettelheim, 1943).

Taken as a whole, the results of the current three experiments are encouraging. There is substantial evidence to suggest that personal causality may indeed be instrumental in peoples' decisions of whether to accept illegitimate authority or alternatively to defy noxious commands. An obvious way to conclude this research would be to claim that the noxious experience is better for defiant participants. In fact, the results indicated that defiance may be as discomforting as is compliance. Participants showed similar levels of defensive coping and psychological tension regardless of whether they had defied or complied with the experimenter's demands. An interesting exception occurred in Experiment 3, in which compliant participants experienced greater negative feelings (i.e., they reporting feeling more self-critical, guilty, disappointed, annoyed with themselves, angry with themselves, and dissatisfied and disgusted with themselves) when their actions supposedly impacted members of an underprivileged out-group negatively. There was no evidence that compliant participants experienced negative psychological tension in Experiment 1 or in Experiment 2 (in which compliant behavior would have impacted the compliant person as well as others). The implication is that failing to take the opportunity to

protect the interests of disadvantaged peoples stimulates greater self-admonishment than failing to protect the interests of oneself.

Experiment 3 was designed to extend the motivational rationale for defiance to situations that involved acting on behalf of members of an underprivileged out-group. The results from Experiment 3 reinforced the results from the first two experiments in that defiant participants were more likely to have reported experiencing themselves as Origins than were their compliant counterparts. Also, in keeping with previous research (e.g., Sidanius, et. al., 1994; Whitley, 1999), social dominance orientation successfully discriminated between those who supported policy designed to enhance the status of an underprivileged group and those who did not. Those of low SDO were more likely to support legislation that would enhance the status of a deprived group, whereas those of high SDO were more likely to support legislation that maintained the underprivileged status of a deprived group. However, people of low SDO were not more likely to defy the noxious demands to comply than were those of higher SDO. This is an important consideration for research addressing peoples' attitudes towards policies and different groups: while people may endorse progressive political policies, they may not, in fact, act on behalf of disadvantaged group members unless they also have, in Kelman's and Hamilton's (1989) parlance, "personal and political efficacy." The present studies indicated that being autonomously-oriented contributes to the development of such efficacy.

From J.S. Mill to the present day, philosophers and psychologists have proclaimed the benefits of autonomy-supportive developmental environments

(e.g., Mill, 1859; Ryan, Deci, & Grolnick, 1995). It should be noted, however, that those who opposed the same-sex union in Experiment 3 were comprised of both Pawns and Origins. Put differently, those of an autonomous disposition were just as likely to deny civil rights to members of a disadvantaged group. These results should serve as a reminder that that an autonomous developmental path does not inevitably develop wider social motivations. On a related note: although too few people opposed same-sex marriages for meaningful statistical analyses to be conducted, the existing data were interesting. Those who opposed same-sex marriages and reported Pawn-like experiences were just as likely to defy the experimenter's authority as were those who opposed same-sex marriages and reported Origin-like experiences. It is possible that these defiant Pawns complied with a set of strongly socialized values and beliefs that served a greater authority (living or supernatural) than the experimenter sitting in front of them. If so, it would act as a reminder that circumstances could be created in which people who do not consider themselves causal agents would defy to the same degree as those who consider themselves Origins.

The obedience dynamic and future directions.

Employing real contemporaneous social issues in the current experiments likely contributed to the larger number of participants choosing to withdraw from the experiment or choosing to write a defiant essay then had been evidenced in previous research (e.g., Festinger, & Carlsmith, 1959; Lieppe, & Eisenstadt, 1994). Both tuition increases and legislation of same-sex marriages were debated widely in broader society at the time of the experiments. This may be of

importance as psychologists and sociologists have emphasized that an appreciation of wider social and historical contexts aid our understanding of human relations, including compliance and defiance. In particular, Bourdieu (2000) has indicated that systems that are stagnant are perceived differently than those that are in a state of change. Therefore, although tuition guidelines and marital legislation were not actually changing, the possibility of change was being discussed openly. In the laboratory it would be informative to conduct future experiments using similarly topical issues and compare the results of these with experiments using issues divorced from everyday life.

In the current research there were two very definite (and relatively obvious) forms of defiance available. Research participants exercised these forms of defiance frequently (more than 50% defied in all three experiments). For a variety of reasons, we would expect to find lower defiance rates outside the laboratory. First, individuals' courses of potential defiant action may be less obvious, and these actions would often be deemed illegitimate to the point of being illegal. Consider the legal reaction to mass protestors at Globalization talks in the last three years and compare this reaction to that of a psychology experimenter who is ethically bound to ensure that a defiant participant is not treated as a recreant. Would Origins still be more likely than Pawns to defy in real-world circumstances? The rationale I developed earlier suggests that they would. However, assuming that fewer people defy behaviorally in real-world circumstances the research focus may shift slightly. For example, the Origin-Pawn Scale could be administered, or interviews conducted, to determine the

degree to which people of different motivational orientation recognize noxious impositions. Subsequent analyses could determine these individuals' cognitive, affective, and behavioral responses to those impositions. Self-determination researchers have demonstrated that people will differ on cognitive and behavioral dimensions as a result of temporarily induced motivational states. Therefore, we should also expect relatively stable motivational orientations to influence peoples' thinking and behavior in a variety of domains.

Obedience research (including the current studies) is peculiar in that the authority figure is usually in the physical presence of the subordinate. Often, this is not the case in contemporary social life. Typically, people are many steps removed from the decision makers who determine working and living conditions and there are few opportunities for reciprocal interplay between hierarchically dominant and hierarchically inferior persons. How then do people act when their freedom is limited, or when they have been required to act contrary to their values? Some have claimed that concrete gains cannot be made from a lone individual defying an individual shop steward, department head, or experimenter. Indeed, Ratner (2000) points out that individual acts of defiance may prove futile in alleviating oppressive conditions or in promoting liberating conditions unless accompanied by meaningful social change. Such change would likely be resisted by authorities who influence the structure within which subordinates either comply or defy. In the face of overwhelming structural constraints, even the most Origin-like of individuals considering a range of responses to loss of agency may decide that an individual act of defiance would indeed prove futile.

It could be argued that without individual acts of defiance, there would be no impetus for the creation of social movements that eventually effect change. For instance, Rosa Parks had a history of Origin-like behavior (Brinkley, 2000), and her personal defiance is considered a defining moment in the subsequent progress of the American Civil Rights Movement. Indeed, Dr. Martin Luther King Jr. cited Parks' audacious stand (or, more accurately, sit) as the source of the road upon which millions subsequently traveled to find a new sense of dignity. The fact that social conditions improved only after significant collective acts of defiance led to substantial social change in institutions and rules should not negate the importance of individual action. In order for individual defiance to have a meaningful social impact, there must be a dynamic interplay between the individual and the social system of which he or she is a part.

Milgram's critics often charge that his participants were placed in inappropriate circumstances as their single experience of noxious obedience could have had a lasting effect and marked their entire existence. Could a single act of laboratory rebellion have a lasting effect on an individual? Certainly if defiant participants behave consistently with their motivational orientation, they would be more likely to engage in defiant behavior in the future. In real life, however, situations of overt noxious compliance are likely relatively infrequent occurrences. It is more likely that individuals would actively have to seek a situation in which to defy authority as opposed to being presented with an opportunity to defy authority. Indeed, in recent years, mass demonstration has been used as a vehicle to initiate social change. Collective protests against multi-

national organizations and globalization have become more common events. Groups of similarly minded individuals congregate to confront authorities on predetermined occasions. It would be interesting to extend the current research to situations of group defiance and investigate the personal and interpersonal dynamics of collective protest.

Further development of the Origin-Pawn Scale.

Given the overwhelming percentage of students recruited for psychology research (90% of the 15, 400 participants reported in the Journal of Personality and Social Psychology in the last two months of 2001), and the prevalence of motivation research, the student orientation of the Origin-Pawn Scale would prove a valuable addition to the body of self-determination inventories. The primary use of the scale would be as a research tool, particularly in predicting student choices in their educational and life pursuits. Furthermore, it could be used as a preliminary measure to help identify students who feel excessively controlled. Subsequently, participants and researchers could devise strategies to enhance feelings of self-determination. Prior to being used widely, the Origin-Pawn Scale will need to demonstrate good test-retest reliability and show it is related meaningfully to other conceptually relevant questionnaires (e.g., General Causality Orientations Scale; Locus of Control; Social Desirability Scale; Student Interest and Experience Questionnaire; relevant Myers-Briggs subscales) as well as a range of behavioral indicators of motivation.

Concluding remarks.

Social psychologists have studied compliance in a wide variety of experimental and natural situations. It is understandable that conformity and obedience formed an important focus of research following the Second World War. Social researchers were striving to understand how devastating atrocities could be committed by seemingly ordinary people. Originally, Milgram himself was motivated to investigate the dynamics that might account for the widespread obedience evident in concentration camps. Recent events across the world have shown that our increased understanding of pressures leading to noxious compliance have not diminished the occurrence or the severity of inhumane acts. Who can we look upon to rebel and defy commonly accepted authoritative dictates? We know that motivational orientations can be induced and developed by situational factors (deCharms, 1968) and that these orientations will generalize to new contexts (Enzle, et al., 1996). Regardless of the supportiveness of the immediate environment, Origins may have a greater capacity to be causal agents of change which may also lead them to be better equipped to rebel against noxious compliance.

While research on compliance should not cease, it has become increasingly clear that contemporary society also holds potential crises on the other side of the conformity and obedience coin. Specifically, modern stagnation, excessive compliance in everyday life, and a shortage of purposeful rebels threaten to asphyxiate individual and societal growth (Csikszentmihalyi, 1993; Furedi, 1997; Solzhenitsyn, 1978). In addition to researching how people are

induced to comply, it is becoming increasingly important to determine how people can be induced to defy.

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Footnote

[1] Both the General Causality Orientation Scale (Deci, & Ryan, 1985b) and the Work Preference Inventory (Amabile, Hill, Hennessey, & Tighe, 1994) are conceptually similar inventories in that they require people to indicate a preference for autonomous or extrinsically-controlled behavior. The GCOS requires people to indicate how they feel they might act, think, or feel in a particular situation, and the WPI requires people to indicate the typical environment in which they would prefer to work. Therefore, each scale requires participants to respond to hypothetical constructs and does not focus predominantly on the life experiences of respondents. Participants completed both the GCOS and WPI in pilot testing. However, pilot test results revealed an extreme bias in participants reporting themselves to be self-determined to such an extent that the overall range of scores was extremely limited. The Student Origin-Pawn Scale was created to apply more closely to the daily experiences of students. This scale produced a greater range of scores than either the GCOS or the WPI and, in response to research time-constraints, was the only autonomy scale used in the three experiments reported here.

Exploratory factor analysis was performed on the Origin-Pawn Scale using data from participants in each of the three experiments (N = 172). Potential factors were extracted by the principal components method and subjected to an oblique (direct oblimin) rotation as individual factors were expected to show moderate inter-correlations. Five factors displayed eigenvalues of greater than one and had at least three items per factor. Items displaying a loading of .60 or greater

were included in a factor provided they did not load similarly on another factor. The first factor included 6 items (see Appendix) and was named Student Causality (α = .84). The second factor comprised three items that reflected Helplessness (α = .60). An Enjoyment-Positivity factor also included three items (α = .65), while a Personal Driving Force comprised four items (α = .73). Finally, three items constituted a Persuadability factor (α = .66).

Appendix

Table 1

Experiment 1: Chi-square of Defiant and Compliant Participants According to Motivational Orientation

	Origins	Pawns	Totals
Defiant participants	18 (9/9)	9 (4/5)	27
Compliant participants	7	16	23
	25	25	50

(First number in parantheses indicates number of participants who refused to write an essay. Second number in parantheses indicates number of participants who wrote a pro-attitudinal essay)

Table 2

Experiment 2: Chi-square of Defiant and Compliant Participants According to Motivational Orientation

	Origins	Pawns	Totals
Defiant participants	16 (12/4)	12 (9/3)	28
Compliant participants	9	13	22
	25	25	50

(First number in parantheses indicates number of participants who refused to write an essay. Second number in parantheses indicates number of participants who wrote a pro-attitudinal essay)

Table 3

Experiment 3: Chi-square of Defiant and Compliant Participants According to Motivational Orientation

	Origins	Pawns	Totals
Defiant participants	18 (10/8)	6 (1/5)	24
Compliant participants	9	21	30
	27	27	54

(First number in parantheses indicates number of participants who refused to write an essay. Second number in parantheses indicates number of participants who wrote a pro-attitudinal essay)

Table 4

The Origin-Pawn Scale

Item	Origin-Pawn Scale	Factor
1.	For the most part, what I'm doing with my life has been determined solely by me.	4
2.	When I think of my work and education, it seems that I spend more time doing what other people want me to do and less time doing what I choose to do.*	1
3.	Often I feel as though the University has pushed me from course to course without me having much say in the matter.*	1
4.	I don't allow others to dictate what I do.	4
5.	If I'm having difficulties with a problem, I would rather someone showed me the answer than having to struggle with the problem myself.*	2
6.	I'm often coerced into doing things by my friends and family.*	5
7.	When I think of my life in general, it seems I spend more time doing what I choose to do than what people want me to do.	1
8.	I wouldn't pretend to agree with my professor's viewpoint in order to boost my grade.	3
9.	When I'm uncertain of what to do, it's a good idea to wait and see what others are doing.*	5
10.	Much of what I do is influenced by other peoples' expectations of me.*	5
11.	My learning is motivated by enjoyment and interest rather than the quest for good grades.	3
12.	When I reflect on my life, I can see that I'm often treated like a Pawn.*	1
13.	I like to have someone else set clear goals for me in my work.*	4
14.	For the most part, my life is liberating rather than constraining.	3
15.	I often find that I enjoy what I'm doing so much that I wouldn't need money or good grades to keep on doing it.	3
16.	If things don't go the way I want them to, I might not succeed in life.*	2
17.	If it meant getting a promotion, I would do whatever assignments and tasks my boss wanted.*	2
18.	Most of the time I feel free to do what I want to do.	1
19.	My University experiences have given me a sense of power and personal control.	1
20.	I'm the driving force behind much of what I do.	4

* indicates that item was reversed scored.